July 28, 2011

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: *"Need for Speed" Information for Consumers of Broadband Services,*
        CG Docket No. 09-158, WC Docket No. 04-36, CC Docket No. 98-170

Dear Ms. Dortch:

        In the context of the "Need for Speed" proceeding and the pending release of the broadband consumer wireline performance test results, Netflix would like to take this opportunity to comment on information that could benefit consumers in reviewing broadband performance data.

        As a general matter, it is important to remember that any guidance for consumers would be based on a snapshot of technology as it exists today, and that technology will continue to evolve rapidly. Thus, while it is useful for consumers to be aware of the performance characteristics of their broadband networks, at least some assessments will become less accurate over time and will likely need to be revisited.

        In addition, using the label "speed" to describe multiple parameters of interest to consumers—such as actual speed, latency, consistency/loss, up/down symmetry, etc.— can be potentially misleading.

        For example, consumers using Netflix are likely to experience good performance for streaming features at 1 Mbps for standard definition (SD), and 2.6-4.5 Mbps for high definition (HD) video. Netflix expects the speeds required for the same quality video will continue to get lower as H.264 video compression encoders continue to improve.

        With respect to the importance of parameters beyond pure "speed", for example, a good DSL link may have low speed, but have the consistency, symmetry, and low latency to deliver a high quality video conference. Conversely, a noisy cable line might have relatively high speed and low latency for high quality VOIP, but have a packet loss rate that causes the total throughput for streaming video to be poor. In other words, much depends on the specific characteristics of the broadband connection in question. Of course, wireless broadband connections typically have a very different profile with respect to their relevant technical parameters.

        Finally, Netflix notes that the concept of a "web page" is increasingly becoming irrelevant. For Netflix, "web pages" are increasingly becoming applications with interactions that come back to Netflix's servers in real-time — interactions that are

increasingly demanding. For example, certain embedded real-time video applications (*e.g.*, a preview clip that plays when a subscriber hovers over an image) may need broadband connection speeds of over 1 Mbps to be truly effective.

Sincerely,

_____/s/_____

Neil Hunt
Chief Product Officer